



Inland Electronic Navigation Charts

Technology

As part of a continuing development effort, ERDC has completed inland electronic navigation charts (IENCs) for U.S. waterways in the Lower and Upper Mississippi River, Ohio River, Black Warrior-Tombigbee River, Atchafalaya River, and Red River. These charts provide accurate, up-to-date input to the electronic charting systems increasingly used by waterways navigators. IENCs cover inland waterways and reflect changing conditions to help river traffic avoid collisions and groundings, aid in low visibility navigation and operator training, and enhance efficient vessel operations.

Problem

The U.S. inland navigation system consists of 8,200 miles of rivers maintained by the Corps of Engineers in 22 states, and includes 276 lock chambers with a total lift of 6,100 feet. The highly adaptable and effective system of barge navigation moves over 625 million tons of commodities annually, including coal, petroleum products, various other raw materials, food and farm products, chemicals, and manufactured goods. Towing vessels have begun using electronic chart systems, although the lack of accurate, up-to-date electronic chart information limits the benefit of such systems. Accurate electronic chart data that cover all waterways, reflect changing conditions, and are in a format compatible with commercial systems, is needed.



**Expected Cost
To Implement**

Completed charts are available to end users through the Internet without charge through the Internet URL listed in the “Distribution Sources” section below.

Benefits/Savings

IENCs provide a useful display for automatic identification systems, and help river navigators avoid collisions with fixed structures, such as bridge piers. The availability of free, reliable chart data also encourages the navigation industry to use electronic chart technology. Within the Corps, IENCs provide a common database to produce electronic and paper chart products.

Status

Development of IENCs covering the Lower and Middle Mississippi and Ohio Rivers formally began in Fiscal Year 2002. Existing IENCs are modified and updated as new information becomes available. (The “date posted” of files on the file download site indicates the data’s currency.) Coverage of all additional U.S. waterways is expected by 2009.

ERDC POC

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Distribution Sources

As IENCs are developed, they are made available for download from the Corps E-Charting web site:

<http://www.tec.army.mil/echarts>

Available Documentation

Descriptive on-line materials related to IENC structure, specifications, and features (and links to free viewing software) are available through URL:

<http://www.tec.army.mil/echarts/inlandnav/>

Available Support

The Corps of Engineers electronic chart for navigation initiative maintains a public online forum to air questions, ideas, and issues through URL:

<http://www.tec.army.mil/echarts/forum/index.html>

Registration for the forum is free. All registered members may view the forum, and a user name and password are required to respond to or initiate a topic.